

AMENDMENTS TO THE CLAIMS:

1. (currently amended) An intervertebral implant comprising:

(A) two articulating parts each having a central axis, each having a slide surface intersecting the central axes and each having an outermost end that can be connected to a bone, wherein:

(B) the slide surfaces are curved,

(C) the slide surfaces are mutually displaceable, and

(D) the second slide surface is rotatable about two skewed axes of rotation relative to the first articulating part,

(E) the outermost ends of the articulating parts each comprise a connection element, wherein:

(F) at least one of the connecting elements is fitted with an oval recess coaxial with the central axis, the at least one oval recess being sized and configured to receive one of the outermost ends of the adjoining articulating part; wherein:

(G) the recess is fitted with an axially terminal cavity and the adjoining outermost end of the adjacent articulating part comprises a widening coaxial with the central axis, said widening being insertable into the cavity so that said at least one articulating part is slideably displaceable, in situ, with respect to said adjoining connecting element, and

(H) the slide surfaces are saddle-shaped having a compound radius with at least two inflection points.

2. (previously presented) The implant as claimed in claim 1, wherein the slide surfaces each comprise a saddle point.

3. (previously presented) The implant as claimed in claim 1, wherein the axes of rotation cross each other at an angle between about 80 to 100 degrees.

4. (previously presented) The implant as claimed in claim 1 wherein the axes of rotation are spaced apart from one another a minimum distance A that is between

about 0.1 to 20 mm.

5. (previously presented) The implant as claimed in claim 4, wherein the distance A is between about 2 to 20 mm.

6. (previously presented) The implant as claimed in claim 1, wherein the slide surfaces each comprise a saddle-point and wherein, when the second articulating part is rotated about either one of the axes of rotation, the second saddle point moves along an arc of circle concentric with said either one of the axes of rotation.

7. (previously presented) The implant as claimed in claim 1, wherein, in an initial position, the slide surfaces are congruent at coaxial central axes of the articulating parts.

8. (previously presented) The implant as claimed in claim 1, wherein the connection elements are designed as cover plates having an axially outermost surface transverse to the central axes.

9. (previously presented) The implant as claimed in claim 8, wherein one of the cover plates is integral with the adjoining articulating part.

10. (previously presented) The implant as claimed in claim 8, wherein one of the cover plates is fitted with a guide perpendicular to one of the central axes and wherein the adjoining articulating part comprises a rear end insertable into the guide.

11. (previously presented) The implant as claimed in claim 1, wherein one of the articulating parts is rotated about its central axis in order to be assembled to the associated connection element.

12. (previously presented) The implant as claimed in claim 1, wherein one of the articulating parts is displaced in a plane perpendicular to its central axis in order to be assembled to the associated connection element.

13. (previously presented) The implant as claimed in claim 1, wherein one of the articulating parts is displaced in a plane perpendicular to its central axis in order to be assembled to the associated connection element.

14. (previously presented) The implant as claimed in claim 1, wherein one of the articulating parts is made of plastic.

15. (previously presented) The implant as claimed in claim 1, wherein at least one of the articulating parts is made of a ceramic.

16-18. (canceled)

19. (currently amended) An intervertebral implant for implantation between first and second vertebra, said implant comprising:

a first end plate having an inner side and a first bone contacting surface, said first bone contacting surface being sized and configured to contact said first vertebra;

a second end plate having an inner side and a second bone contacting surface, said second bone contacting surface being sized and configured to contact said second vertebra;

a first member having a first end and a second end, said first end being sized and configured to contact said first end plate, said second end having a first saddle-shaped contact surface having a compound radius with at least two inflection points; and

a second member having a first end and a second end, said first end being sized and configured to contact said second end plate, said second end having a second saddle-shaped contact surface for contacting said first saddle-shaped contact surface of said first member, said first and second saddle-shaped contact surfaces being sized and configured to permit said first member to articulate with respect to said second member along said first and second saddle-shaped contact surfaces;

wherein said inner side of said first end plate includes a recess and said first end of said first member is sized and configured to be received within said recess so that said first member is moveable with respect to said first end plate even after implantation.

20. (previously presented) The implant of claim 19, wherein said first member is slideably displaceable with said first end plate.

21. (previously presented) The implant of claim 20, wherein said first

member is sized and configured to be slideably displaced in a first direction but not in a second direction.

22. (previously presented) The implant of claim 21, wherein said recess formed in said inner side of said first member is an oval recess.

23. (previously presented) The implant of claim 19, wherein said first member is permitted to twist with respect to said first end plate.

24. (previously presented) The implant of claim 19, wherein said first member is permitted to rotate with respect to said first end plate.

25. (previously presented) The implant of claim 19, wherein said second member is fixed with respect to said second end plate.

26. (previously presented) The implant of claim 19, wherein said second member and said second end plate are integral with one another.

27. (previously presented) The implant of claim 19, wherein said first and second saddle-shaped contact surfaces are sized and configured to permit said first member to articulate with respect to said second member along said first and second saddle-shaped contact surfaces through a limited angle of rotation.

28. (previously presented) The implant of claim 27, wherein said angle of limitation between said first and second members is limited by a portion of one of said first and second members contacting one of said inner sides of said first and second end plates.

29. (previously presented) The implant of claim 19, wherein said first member is rotatable with respect to said second member about two mutually skewed axes of rotation.

30. (previously presented) The implant of claim 29, wherein said two mutually skewed axis of rotation are separated by a distance A, said distance A being between 0.1 and 20 mm.

31. (previously presented) The implant of claim 19, wherein said first and second bone contacting bone contacting surfaces each include a connection element for

engaging said first and second vertebra respectively.

32. (currently amended) An intervertebral implant for implantation between first and second vertebra, said implant comprising:

a first end plate having an inner side and a first bone contacting surface, said first bone contacting surface being sized and configured to contact said first vertebra;

a second end plate having an inner side and a second bone contacting surface, said second bone contacting surface being sized and configured to contact said second vertebra;

a first member having a first end and a second end, said first end being sized and configured to contact said first end plate, said second end having a first saddle-shaped contact surface having a compound radius with at least two inflection points; and

a second member having a first end and a second end, said first end being sized and configured to contact said second end plate, said second end having a second saddle-shaped contact surface having a compound radius with at least two inflection points, for contacting said first saddle-shaped contact surface of said first member, said first and second saddle-shaped contact surfaces being sized and configured to permit said first member to articulate with respect to said second member along said first and second saddle-shaped contact surfaces;

wherein said inner side of said first end plate includes a recess and said first end of said first member is sized and configured to be received within said recess so that said first member is slideably displaceable, in-situ, in a first direction with respect to said first end plate but not in a second direction.

33. (previously presented) The implant of claim 32, wherein said recess formed in said inner side of said first member is an oval recess.

34. (previously presented) The implant of claim 32, wherein said second member is fixed with respect to said second end plate.